

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No: Q80281

Hideo MATSUNAGA, et al.

Appln. No.: 10/802,874

Group Art Unit: 3711

Confirmation No.: 5453

Examiner: Sebastiano PASSANITI

Filed: March 18, 2004

For: GOLF CLUB HEAD

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellants submit
the following:

I. REAL PARTY IN INTEREST

The real parties in interest in this appeal is BRIDGESTONE SPORTS CO., LTD., of Japan. The assignment was previously submitted and was recorded on February 27, 2004, at Reel 015114, Frame 0298.

II. STATEMENT OF RELATED CASES

To the knowledge and belief of Appellants, the Assignees, and the Appellants' legal representative, there are no other appeals or interferences before the Board of Appeals and Interferences that will directly affect or be affected by the Board's decision in the instant Appeal.

III. JURISDICTIONAL STATEMENT

The Board has jurisdiction to consider this appeal under 37 C.F.R. § 41.35.

This appeal is from the rejections set forth in the Final Office Action dated July 11, 2008.

The Notice of Appeal was filed on October 14, 2008.

This Appeal Brief is being filed on December 15, 2008 (December 14, 2008 being a Sunday).

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V. TABLE OF AUTHORITIES

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Nystrom v. TREX Co., 424 F.3d 1136, 1149 (Fed. Cir. 2005).....17, 18

Other Authority

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VI. STATUS OF AMENDMENTS

The Amendment submitted on February 15, 2008, included claim modifications amending claims 14, and 15, and adding new claims 16-20. The Amendment and arguments for patentability are believed to have been entered and made of record, as indicated in the Final Office Action dated July 11, 2008. There are no outstanding amendments to the claims or to the specification in the present application.

The recitation of the claims is set forth in the attached Appendix.

VII. GROUNDS OF REJECTION TO BE REVIEWED

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya et al. (U.S. Patent No. 5,346,217; hereinafter “Tsuchiya”) in view of Motomiya (U.S. Patent No. 4,438,931; hereinafter “Motomiya”), Hoshi (U.S. Patent No. 5,205,560; hereinafter “Hoshi”), Tsuchida (U.S. Patent No. 5,255,913; hereinafter “Tsuchida”), Kusumoto (U.S. Patent No. 6,634,958; hereinafter “Kusumoto”), Murphy (U.S. Patent No. 6,332,847; hereinafter “Murphy”), Dekura (U.S. Patent No. 5,538,246; hereinafter “Dekura”) and Imai (U.S. Patent No. 6,056,649; hereinafter “Imai”).

VIII. STATEMENT OF FACTS

An objective and non-argumentative statement of the material facts relevant to the rejections on appeal is as follows:

1. The present invention is directed to a hollow golf club head made of metal. See Specification at 1, lines 10-12.
2. Claim 1 recites, inter alia, an intersection angle between the crown portion and the side portion is larger than 90 degrees.
3. The Examiner alleges that Kusumoto and Murphy, Dekura, and Imai, disclose an intersection angle between the crown portion and the side portion being larger than 90 degrees. See FOA at 6-7.
4. The Examiner relies on Figures 6A, 6B and 6C in Kusumoto, Figure 5 in Murphy, Figure 1 in Dekura and Figure 1 in Imai as allegedly disclosing the claimed intersection angle of claim 1. See id.
5. Kusumoto and Murphy are directed to hosel integration with the club head. See Kusumoto at Abstract; and Murphy at Abstract.
6. Murphy is directed to a golf club head having a sole plate and hosel integral piece which improves the consistency of the loft and lie parameters of a golf club head. See Abstract.

7. Murphy discloses that the hosel 38 lies at an angle of 95 degrees to 135 degrees relative to the sole plate 42. See FIGS. 8-11; and col. 3, lines 31-32.

8. Kusumoto is directed to a golf club includes a shaft and a head fixed to a forward end of the shaft to provide a golf club in which the bend of the shaft can be fully utilized. See col. 1, lines 36-41.

9. Dekura is directed to a golf club in which a shaft is inserted into a hosel attaching section of a hollow metallic head through a hosel. See col. 1, lines 51-62.

10. Imai is directed to a golf club head having a lowered position of the center of gravity of the club head and providing a smooth follow-up swing of the club head and an increased flying distance of the golf ball. See col. 1, lines 5-9.

11. Claim 14 recites a hollow golf club head wherein the sole portion and the side portion are made of titanium alloy of Ti-6Al-4V and are molded by casting, and wherein the sole portion is thicker than the lower side portion, in combination with other elements of the claim.

12. On page 5 of the Non-Final Office Action, the Examiner cites column 9, line 11 through column 10, line 2 of Tsuchiya as allegedly disclosing certain features of claim 14..

13. Column 9, line 11 through column 10, line 2 of Tsuchiya cited by the Examiner merely disclose “at least a part of said face being made of Ti alloy of a composition which contains 3 to 6% by weight of Al, 2 to 4% by weight of V, 1 to 3% by weight of Mo. 1 to 3% by weight of Fe and Ti in balance.” Column 9, line 11 through column 10, line 2 of Tsuchiya.

14. Tsuchiya makes no mention of the sole or the side portions of Tsuchiya as being made of the composition recited in claim 14.

15. The Examiner has rejected claims 16-20 under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai. See FOA at 2.

16. In the Final Office Action, the Examiner concedes that Tsuchiya fails to disclose that the upper side portion has a Young’s modulus lower than the lower side portion and the hosel portion as recited in claim 16. See FOA at 8.

17. The Examiner cites Tsuchida and Hoshi as allegedly disclosing the upper side portion has a Young's modulus lower than the lower side portion and the hosel portion as recited in claim 16. See FOA, pg. 8.

18. Tsuchida discloses a crown portion 5 having a modulus which is different from the rest of the shell. See col. 6, lines 44-57 of Tsuchida.

19. Hoshi discloses a crown portion (14b) which has a modulus that is different from at least the sole portion. See col. 6 lines 4-16 (cited in FOA, pg. 8).

IX. ARGUMENT

A. Rejection of claims 1-15 under § 103(a) over Tsuchiya, in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai

Claims 1-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai. Final Office Action of July 11, 2008 at 2 (hereinafter “FOA”).

Appellants submit that claims 1-15 are patentable at least the following reasons.

1. Claims 1-15 are patentable over Tsuchiya, in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai

Claim 1 recites:

A hollow golf club head made of metal comprising:

a face portion;

a sole portion;

a side portion; and

a crown portion,

wherein the crown portion and at least a part of the side portion have a Young’s modulus lower than the face portion and the sole portion, and an intersection angle between the crown portion and the side portion is larger than 90 degrees.

The Examiner alleges that claim 1 is obvious under a combination of Tsuchiya in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai. FOA at 2. Specifically, the Examiner argues that Kusumoto, Murphy, Dekura, and Imai, disclose the claimed intersection angle between the crown portion and the side portion being larger than 90 degrees, based purely on the supposed dimensions in the drawings. See FOA at 6-7 and 12. Appellants respectfully disagree.

In the Amendment of February 15, 2008, the Appellants pointed out that the Examiner's position is entirely inconsistent with established Federal Circuit case law.¹ “[I]t is well established that patent drawings do not define the precise

¹ Appellants argued the following:

The Federal Circuit has held that “it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” See Hockerson-Halberstadt, Inc. v. Avia Group Int'l, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (cited in MPEP 2125). The Examiner cites Figures 6A, 6B and 6C in Kusumoto, Figure 5 in Murphy, Figure 1 in Dekura and Imai are being relied on as allegedly disclosing the claimed intersection

...(footnote continued)

proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” See Hockerson-Halberstadt, Inc. v. Avia Group Int'l, 222 F.3d 951, 956, 55 U.S.P.Q.2d 1487, 1491 (Fed. Cir. 2000) (cited in MPEP 2125). Subsequent decisions of the Federal Circuit have continuously upheld this holding in Hockerson-Halberstadt.

In Go Medical Indus. Pty., Ltd. v. Inmed Corp., the preferred length of 1.5 cm was not expressly disclosed in the specification. See 471 F.3d 1264, 1271 (Fed. Cir. 2006). The Federal Circuit held that the drawings submitted with the application were insufficient because there was no indication that Figure 1 was drawn to any particular scale, much less one where the distance between the "X" and the outer end of the urethra was exactly 1.5 cm. See Id. “Patent drawings do

angle. However, the specifications of the references are completely silent on any sort of an intersection angle between a crown and a side portion, and thus, in light of the Federal Circuit decision in Hockerson-Halberstadt, it is impermissible to rely on the drawings of Kusumoto, Murphy, Dekura and Imai, as disclosing or even suggesting the claimed intersection angle.

See id at 7-8; and FOA at 11.

not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” Nystrom v. TREX Co., 424 F.3d 1136, 1149 (Fed. Cir. 2005) (quoting Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Ltd., 222 F.3d 951, 956 (Fed. Cir. 2000)); See also In re Wright, 569 F.2d 1124, 1127 (C.C.P.A.1977) (“Absent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value.”).²

² Furthermore, in the recent decision in First Years, Inc. v. Munchkin, Inc., the District Court rejected the Defendant’s assertion of obviousness based on the drawings in the specification. 575 F. Supp. 2d 1002, 1026-1027 (W.D.Wis.,2008). The District Court, following the Hockerson-Halberstadt decision, held that:

Defendant's effort to show the obviousness of claims 36 and 65 falls short. Defendant points to drawings in the Gartner specification showing the hole size (which is elsewhere described as between about 0.02 inch and 0.04 inch) and showing lid thickness of about the same size in the drawing. However, the drawing is not drawn to scale, and "arguments based on drawings not explicitly made to scale in issued patents are unavailing" as proof of invalidity based on the prior art.” Nystrom v. Trex Co., Inc., 424 F.3d 1136, 1149 (2005) (citing

...(footnote continued)

Similarly, in the present appeal, none of specifications of Kusumoto, Murphy, Dekura and Imai expressly disclose that the claimed intersection angle between the crown portion and the side portion is larger than 90 degrees. Moreover, there is also no indication that Figures 6A, 6B, and 6C in Kusumoto, Figure 5 in Murphy, Figure 1 in Dekura and Imai, which the Examiner relies on in rejecting claim 1, are drawn to any particular scale. Therefore, in light of the decisions in Go Medical, Nystrom, and Hockerson-Halberstadt, and references' complete silence on the claimed intersection angle, the Examiner's position that the drawings of the cited references disclose the claimed intersection angle is without support.

Rather, one of ordinary skill in the art would not reasonably view Kusumoto and Murphy as disclosing or suggesting the claimed intersection angle between the crown portion and the side portion being larger than 90 degrees, because both references are directed to hosel integration with the club head. A hosel is fit at the heel of the clubhead, and the portions of Kusumoto and Murphy cited by the

Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc., 222 F.3d 951, 956 (Fed. Cir. 2000)).

Examiner as allegedly disclosing the claimed intersection angle are at the opposite end of the clubhead, i.e., at the toe of the clubhead. Since the disclosures of Kusumoto and Murphy are directed to the heel portion, one of ordinary skill in the art would not look at the toe portion of Kusumoto and Murphy in modifying the teachings of the Tsuchiya.

In responding to Appellants' arguments, the Examiner, in the Final Office Action of July 11, 2008, quotes MPEP § 2125 as allegedly supporting his position:

When the reference is a utility patent, it does not matter that the feature shown is unintended or unexplained in the specification. The drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art .

FOA at 12-13 (emphasis removed and citations omitted). Appellants respectfully submit that any evaluation of what the drawings reasonably disclose and suggest to one of ordinary skill in the art must necessarily be constrained by the Federal Circuit's holding in Hockerson-Halberstadt and its progeny. In other words, the Examiner is not permitted to speculate beyond the reasonable disclosures of the references and overreach the boundaries set by the Federal Circuit.

Further, the claimed intersection angle is an inventive aspect of the invention

and must be considered. On page 8 of the Non-Final Office Action of November 16, 2007, the Examiner stated that “no mention or reasoning whatsoever has been provided by the Appellants in his remarks for explaining why the requirement that an intersection angle of larger than 90 degrees exist between the crown portion and the side portion is so important.” Therefore, “one of ordinary skill in the art would not even have to consider what the purpose of this feature is in any of the Kusumoto, Murphy, Dekura and Imai references.” See Office Action of November 16, 2007 at 8.

Appellants respectfully submit that the claimed golf club head wherein “an intersection angle between the crown portion and the side portion is larger than 90 degrees,” is an inventive and useful aspect of the Appellants’ invention.

Appellants point out page 5, lines 14-18 of the specification which describe an exemplary embodiment of the invention, which explains that “[i]n order to perform casting or the like easily, an intersection angle between the crown portion 11 and the upper side portion 12 is larger than 90 degrees.” Therefore, the intersection angle as claimed is at least useful and, therefore, the Examiner must consider this aspect of the claims.

In view of established Federal Circuit caselaw, Appellants submit that the Examiner has failed to show how the intersection angle of claim 1 is disclosed or suggested by Kusumoto, Murphy, Dekura, and Imai. Hence, the Examiner has not shown how one skilled in the art would modify the teachings of Tsuchiya with Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai to render claim 1 obvious. Appellants respectfully submit that claim 1 is patentable.

2. Claims 2-16 and 20 are patentable over Tsuchiya, in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai

Claims 2-6, which depend from claim 1, are patentable for at least the reasons submitted for claim 1.

Claims 7, 13-15, and 20 are patentable for reasons similar to those submitted for claim 1. Claims 8-12, which depend from claim 7, are patentable for at least the reasons submitted for claim 7.

Regarding claim 14, Appellants submit that claim 14 is further patentable because the cited references do not disclose or suggest a hollow golf club head wherein the sole portion and the side portion are made of titanium alloy of Ti-6Al-4V and are molded by casting, and wherein the sole portion is thicker than the

lower side portion, in combination with other elements of the claim. On page 5 of the Non-Final Office Action, the Examiner cites column 9, line 11 through column 10, line 2 of Tsuchiya as allegedly disclosing such claimed features.

Appellants respectfully submit that the Examiner is incorrect because the cited portions of Tsuchiya merely disclose “at least a part of said face being made of Ti alloy of a composition which contains 3 to 6% by weight of Al, 2 to 4% by weight of V, 1 to 3% by weight of Mo, 1 to 3% by weight of Fe and Ti in balance.” No mention is made of the sole or the side portions of Tsuchiya as being made of the disclosed composition.

B. Rejection of claims 16-20 under § 103(a) over Tsuchiya in view of Motomiya, Hoshi, Tsuchida, Kusumoto Murphy, Dekura and Imai

The Examiner has rejected claims 16-20 under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai (FOA at 2).

1. Claims 16-20 is patentable over Tsuchiya, in view of Motomiya, Hoshi, Tsuchida, Kusumoto, Murphy, Dekura and Imai

Claim 16 is patentable because Tsuchiya in view of Motomiya, Hoshi, Tsuchida, Kusumoto Murphy, Dekura and Imai, fail to disclose or suggest (emphasis added):

A hollow golf club head made of metal comprising:

a face portion;

a sole portion;

a side portion that includes an upper side portion corresponding to an upper half portion of the side portion and a lower side portion corresponding to a lower half portion of the side portion;

a crown portion that includes an hosel portion; and

a hosel portion,

wherein the upper side portion has a Young's modulus lower than the lower side portion and the hosel portion.

The Examiner fails to point out and Appellants have not found anything in the cited references which disclose or suggest the upper side portion having a Young's modulus lower than the lower side portion and the hosel portion.

In the Final Office Action, the Examiner concedes that Tsuchiya fails to disclose that the upper side portion has a Young's modulus lower than the lower side portion and the hosel portion as recited in claim 16. See FOA at 8. However, the Examiner cites Tsuchida and Hoshi as allegedly disclosing such claimed features. See id. More specifically, the Examiner asserts that Tsuchida discloses that the crown portion (5) is made of a first material with a modulus of 210 GPA, while the remainder of the shell is made of a material having a modulus of between 150-250 GPA. See id. (citing col. 6, lines 44-57 of Tsuchida).

Appellants, however, note that the Examiner merely points out Tsuchida as disclosing a crown portion 5 having a modulus which is different from the rest of the shell. See id. (citing col. 6, lines 44-57 of Tsuchida). Hoshi is cited by the Examiner as disclosing a crown portion (14b) which has a modulus that is different from at least the sole portion. See id. (citing col. 6 lines 4-16 of Hoshi).

In contrast, claim 16 does not compare the modulus of the crown portion with the lower side portion and the hosel portion. Rather, the claim recites that the upper side portion has a Young's modulus lower than the lower side portion and the hosel portion.

Further, the crown portion in Tsuchida and Hoshi cannot possibly

correspond to the claimed upper side portion corresponding to an upper half portion of the side portion, given that claim 16 separately recites a crown portion. In other words, the upper side portion clearly not the same as the crown portion as the Examiner argues, but the crown portion is a separate element of the head. The upper side portion corresponds to an upper half portion of the side portion, not to an upper half portion of the head. Similarly, the lower side portion corresponds to an lower half portion of the side portion, not to a lower half portion of the head.

The Examiner argues in the Final Office Action that “the identification of an upper half portion and lower half portion corresponding to the upper side portion and lower side portion, respectively, of the side portion is purely subjective.” FOA at 9. Appellants respectfully disagree. As argued above, the Examiner’s “purely subjective” interpretation of claim 16 impermissibly ignores the distinct recitations of claim 16 which separately recite a crown portion and the side portion that includes an upper side portion corresponding to an upper half portion of the side portion and a lower side portion corresponding to a lower half portion of the side portion.

In view of the above, Appellants respectfully submit that a prima facie case of obviousness has not been established and that claim 16 is patentable.

Claims 17-20, which depend from claim 16, are patentable for at least the reasons submitted for claim 16.

In view of the foregoing, Appellants submit that all the pending rejections should be withdrawn.

The USPTO is directed and authorized to charge the statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/ S. Stuart Lee /

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WASHINGTON OFFICE

23373

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Date: December 15, 2008

X. APPENDIX

CLAIMS

Claims 1-20 are pending

1. (rejected). A hollow golf club head made of metal comprising:

a face portion;

a sole portion;

a side portion; and

a crown portion,

wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion, and an intersection angle between the crown portion and the side portion is larger than 90 degrees.

2. (rejected). The golf club head according to claim 1, wherein the crown portion and the at least part of the side portion are press-molded separately from other portions and joined to the other portions.

3. (rejected). The golf club head according to claim 1, wherein the crown portion and the at least part of the side portion have thickness in a range of from 0.5 mm to 1.2 mm.

4. (rejected). The golf club head according to claim 1,
wherein the metal forming the golf club head includes at least one of titanium and titanium alloy;
wherein the crown portion and the at least part of the side portion have a Young's modulus not higher than 10,500 kgf/mm²; and
wherein the sole portion has a Young's modulus not lower than 11,000 kgf/mm².

5. (rejected). The golf club head according to claim 1,
wherein difference between Young's modulus of the crown portion and the at least part of the side portion and that of the sole portion is in a range of from 1,000 kgf/mm² to 3,000 kgf/mm²

6. (rejected). The golf club head according to claim 1, wherein a rib is formed on the sole portion from a face side thereof toward a back side thereof.

7. (rejected). A hollow golf club head made of metal comprising:
- an upper member including a crown portion and a part of a side portion;
 - a lower member including a sole portion;
 - a face plate; and
 - a hosel portion, wherein:
 - the upper member has a Young's modulus lower than the lower member and the face plate, and an intersection angle between the crown portion and the side portion is larger than 90 degrees.
8. (rejected). The golf club head according to claim 7, wherein the lower member further includes the remaining part of the side portion.
9. (rejected). The golf club head according to claim 7, wherein the upper member has thickness in a range of from 0.5 mm to 1.2 mm.
10. (rejected). The golf club head according to claim 7,

wherein the metal forming the golf club head includes at least one of titanium and titanium alloy;

wherein the upper member has a Young's modulus not higher than 10,500 kgf/mm²; and

wherein the lower member has a Young's modulus not lower than 11,000 kgf/mm².

11. (rejected). The golf club head according to claim 7,

wherein difference between Young's modulus of the upper member and that of the lower member is in a range of from 1,000 kgf/mm² to 3,000 kgf/mm²

12. (rejected). The golf club head according to claim 7, wherein a rib is formed on the sole portion from a face side thereof toward a back side thereof.

13. (rejected). A hollow golf club head made of metal comprising:
a face portion;

a sole portion;

a side portion; and

a crown portion,

wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion, an intersection angle between the crown portion and the side portion is larger than 90 degrees, and a thickness of the sole portion is bigger than that of the crown portion and that of the side portion.

14. (rejected). A hollow golf club head made of metal comprising:

a face portion;

a sole portion;

a side portion; that includes an upper side portion corresponding to an upper half portion of the side portion and a lower side portion corresponding to a lower half portion of the side portion; and

a crown portion,

wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion, an intersection angle between the crown portion and the side portion is larger than 90 degrees, and

the sole portion and the side portion are made of titanium alloy of Ti-6Al-4V and are molded by casting, and

wherein the sole portion is thicker than the lower side portion.

15. (rejected). A hollow golf club head made of metal comprising:

a face portion;

a sole portion;

a side portion; and

a crown portion,

wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion, an intersection angle between the crown portion and the side portion is larger than 90 degrees, and the sole portion and the side portion are produced by press-molding, and a thickness of the sole portion and a thickness of the side portion are bigger than that of the crown portion and smaller than that of the face portion.

16. (rejected). A hollow golf club head made of metal comprising:

a face portion;

a sole portion;

a side portion that includes an upper side portion corresponding to an upper half portion of the side portion and a lower side portion corresponding to a lower half portion of the side portion;

a crown portion that includes an hosel portion; and

a hosel portion,

wherein the upper side portion has a Young's modulus lower than the lower side portion and the hosel portion.

17. (rejected). The hollow golf club according to claim 16,

wherein the crown portion and the upper side portion have a Young's modulus lower than the face portion and the sole portion, and

wherein the lower side portion and the sole portion is thicker than the crown portion and the upper side portion.

18. (rejected). The hollow golf club according to claim 16,

wherein the sole portion is thicker than the lower side portion.
19. (rejected). The hollow golf club according to claim 16,

wherein the lower side portion is molded by casting.
20. (rejected). The hollow golf club according to claim 16,

wherein an intersection angle between the crown portion and the side portion
is larger than 90 degrees.

EXEMPLARY CLAIM SUPPORT AND DRAWING ANALYSIS

1. A hollow golf club head made of metal comprising:

(1) a face portion {**FIG. 2, element 40; pg. 2, lines 24-25; and pg. 3, lines 1-3**};

(2) a sole portion {**FIG. 2, element 21; pg. 2, lines 24-25; and pg. 3, lines 1-3**};

(3) a side portion {**FIG. 2, element 12 and 22; pg. 2, lines 24-25; and pg. 3, lines 1-3**}; and

(4) a crown portion {**FIG. 2, element 11; pg. 2, lines 24-25; and pg. 3, lines 1-3**},

(5) wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion {**pg. 3, lines 1-3**}, and (6) an intersection angle between the crown portion and the side portion is larger than 90 degrees {**FIG. 1B; and pg. 5, lines 15-18**}.

7. A hollow golf club head made of metal comprising:

(1) an upper member {FIG. 2, element 10; and pg. 5, lines 10-13} including a crown portion {FIG. 2, element 11; pg. 2, lines 24-25; and pg. 3, lines 1-3} and a part of a side portion {FIG. 2, element 12; and pg. 2, lines 24-25; and pg. 3, lines 1-3};

(2) a lower member {FIG. 2, element 20; and pg. 5, lines 10-13} including a sole portion {FIG. 2, element 21; pg. 2, lines 24-25; and pg. 3, lines 1-3};

(3) a face plate {FIG. 2, element 40; pg. 2, lines 24-25; and pg. 3, lines 1-3}; and

(4) a hosel portion {FIG. 2, element 30; pg. 2, lines 24-25; and pg. 3, lines 1-3}, wherein:

the upper member has a Young's modulus lower than the lower member and the face plate {pg. 3, lines 1-3}, and an intersection angle between the crown portion and the side portion is larger than 90 degrees {FIG. 1B, and pg. 5, lines 14-18}.

13. A hollow golf club head made of metal comprising:

(1) a face portion {FIG. 2, element 40; pg. 2, lines 24-25; and pg. 3, lines 1-3};

- (2) a sole portion {**FIG. 2, element 21; pg. 2, lines 24-25; and pg. 3, lines 1-3**};
- (3) a side portion {**FIG. 2, element 12 and 22; pg. 2, lines 24-25; and pg. 3, lines 1-3**}; and
- (4) a crown portion {**FIG. 2, element 11; pg. 2, lines 24-25; and pg. 3, lines 1-3**},
- (5) wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion {**pg. 3, lines 1-3**}, (6) an intersection angle between the crown portion and the side portion is larger than 90 degrees {**FIG. 1B; and pg. 5, lines 15-18**}, and (7) a thickness of the sole portion is bigger than that of the crown portion and that of the side portion {**pg. 13, and lines 13-19**}.

14. A hollow golf club head made of metal comprising:

- (1) a face portion {**FIG. 2, element 40; pg. 2, lines 24-25; and pg. 3, lines 1-3**};
- (2) a sole portion {**FIG. 2, element 21; pg. 2, lines 24-25; and pg. 3, lines 1-3**};

- (3) a side portion {**FIG. 2, element 12 and 22; pg. 2, lines 24-25; and pg. 3, lines 1-3**}; that includes an upper side portion corresponding to an upper half portion of the side portion {**FIG. 2, element 12; and pg. 5, lines 19-20**} and a lower side portion corresponding to a lower half portion of the side portion {**FIG. 2, element 12; and pg. 5, lines 20-22**}; and
- (4) a crown portion {**FIG. 2, element 11; pg. 2, lines 24-25; and pg. 3, lines 1-3**},
- (5) wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion {**pg. 3, lines 1-3**}, (6) an intersection angle between the crown portion and the side portion is larger than 90 degrees {**FIG. 1B; and pg. 5, lines 15-18**}, and (7) the sole portion and the side portion are made of titanium alloy of Ti-6Al-4V {**pg. 13, lines 15-18**} and are molded by casting {**pg. 13, lines 15-18**}, and
- (8) wherein the sole portion is thicker than the lower side portion {**pg. 13, lines 15-18**}.

15. A hollow golf club head made of metal comprising:

- (1) a face portion {**FIG. 2, element 40; pg. 2, lines 24-25; and pg. 3, lines 1-3** };
- (2) a sole portion {**FIG. 2, element 21; pg. 2, lines 24-25; and pg. 3, lines 1-3**};
- (3) a side portion {**FIG. 2, element 12 and 22; pg. 2, lines 24-25; and pg. 3, lines 1-3**}; and
- (4) a crown portion {**FIG. 2, element 11; pg. 2, lines 24-25; and pg. 3, lines 1-3**},
- (5) wherein the crown portion and at least a part of the side portion have a Young's modulus lower than the face portion and the sole portion {**pg. 3, lines 1-3**}, (6) an intersection angle between the crown portion and the side portion is larger than 90 degrees {**FIG. 1B; and pg. 5, lines 15-18**}, and (7) the sole portion and the side portion are produced by press-molding {**pg. 5, lines 14-15**}, and (8) a thickness of the sole portion and a thickness of the side portion are bigger than that of the crown portion and smaller than that of the face portion {**pg 11, lines 16-25**}.

16. A hollow golf club head made of metal comprising:

- (1) a face portion {**FIG. 2, element 40; pg. 2, lines 24-25; and pg. 3, lines 1-3**};
- (2) a sole portion {**FIG. 2, element 21; pg. 2, lines 24-25; and pg. 3, lines 1-3**};
- (3) a side portion {**FIG. 2, element 12 and 22; pg. 2, lines 24-25; and pg. 3, lines 1-3**} that includes an upper side portion corresponding to an upper half portion of the side portion {**FIG. 2, element 12; pg. 5, lines 19-20**} and a lower side portion corresponding to a lower half portion of the side portion {**FIG. 2, element 12; and pg. 5, lines 20-22**};
- (4) a crown portion {**FIG. 2, element 11; pg. 2, lines 24-25; and pg. 3, lines 1-3**} that includes an hosel portion {**FIG. 2, element 30; pg. 2, lines 24-25; and pg. 3, lines 1-3**}; and
- (5) a hosel portion {**FIG. 2, element 30; pg. 2, lines 24-25; and pg. 3, lines 1-3**},
- (6) wherein the upper side portion has a Young's modulus lower than the lower side portion and the hosel portion {**pg. 6, lines 22-25**}.

EVIDENCE

None.

AFFIDAVITS AND DECLARATIONS

None.

OTHER EVIDENCE FILED PRIOR TO THE NOTICE OF APPEAL

None

OTHER EVIDENCE FILED AFTER THE NOTICE OF APPEAL

None

RELATED CASES

None

PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q80281

Hideo MATSUNAGA, et al.

Appln. No.: 10/802,874

Group Art Unit: 3711

Confirmation No.: 5453

Examiner: Sebastiano PASSANITI

For: GOLF CLUB HEAD

Filed: March 18, 2004

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. The USPTO is directed and authorized to charge the statutory fee of \$540.00 and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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